1: Clin Cancer Res 2001 Mar;7(3 Suppl):838s-847s Related Articles, Links

Recombinant human papillomavirus type 16 E7 protein as a model antigen to study the vaccine potential in control and E7 transgenic mice.

Gerard CM, Baudson N, Kraemer K, Ledent C, Pardoll D, Bruck C.

GlaxoSmithKline Biologicals, Research and Development, Rixensart, Belgium. catherine.gerard@sbbio.be

The early genes E6 and E7 of human papillomavirus type 16 (HPV16) are consistently and exclusively expressed in HPV16-induced cancer lesions and play major roles in the development and maintenance of the malignant phenotype. Because this protein is a good example of a tumor-associated antigen, we have used E7 as a model antigen to test the potential of an experimental vaccine as an immunotherapeutic approach. In this study, we used a murine E7-expressing tumor model (TC1 cells) to assess effects of an E7-based vaccine on tumor growth. We show that vaccination with the E7 protein, formulated in the SmithKline Beecham Biologicals proprietary adjuvants (SBAS 1 and SBAS 2), leads to the rejection of pre-established tumors. Tumor rejection was associated with the induction of a strong systemic T helper 1 response, including CTLs, and the presence of an inflammatory infiltrate within the regressing tumor. Because most identified tumor-associated antigens are self antigens rather viral antigens, we used E7 transgenic mice to evaluate the E7-based vaccine in conditions where E7 is a self antigen. Transgenic mice, which constitutively and specifically express the E7 HPV16 gene in the thyroid epithelium, rapidly develop thyroid goiters and, after several months, thyroid carcinomas. We show that E7-specific antibodies and CD4 T helper responses can be obtained by vaccinating E7 transgenic mice, although a CTL response was not detected. Despite the absence of measurable CTL responses, vaccination still reduced the growth of pre-established TC1 tumors, although less efficiently than in nontransgenic animals, but was unable to suppress or delay the development of the spontaneous thyroid pathology.

PMID: 11300481 [PubMed - indexed for MEDLINE]

1: Vaccine 2001 Jul 20;19(30):4276-86

ELSEVIER SCIENCE FULL-TEXT ARTICLE

A DNA vaccine based on a shuffled E7 oncogene of the human papillomavirus type 16 (HPV 16) induces E7-specific cytotoxic T cells but lacks transforming activity.

Osen W, Peiler T, Ohlschlager P, Caldeira S, Faath S, Michel N, Muller M, Tommasino M, Jochmus I, Gissmann L.

Deutsches Krebsforschungszentrum, Angewandte Tumorvirologie Im Neuenheimer Feld 242, D-69120, Heidelberg, Germany.

Vaccination with oncogene-derived DNA for anti-cancer treatment carries a risk of de-novo tumor induction triggered by the persisting recombinant DNA. We hypothesized that an oncoprotein whose primary sequence has been rearranged ('shuffled') to maintain all possible T cell epitopes still induces cytotoxic T cells against the authentic protein but is devoid of transforming properties. As a model antigen, we used the E7 oncoprotein of the human papillomavirus (HPV) type 16, the major cause of cervical cancer. We have generated an artificial E7 molecule in which four domains were rearranged and, in order to maintain all possible T cell epitopes, certain sequences were duplicated. Upon transfection of this shuffled E7 gene (E7SH) into RMA cells, presentation of an E7 Db-restricted T cell epitope was shown by an E7-specific CTL line in vitro. Immunization of C57BL/6 mice with E7SH DNA induced E7-specific CTL and also conveyed protection against E7-positive syngeneic tumor cells. No transforming activity of E7SH DNA in NIH3T3 cells was detected, as determined by focus formation, induction of S-phase under conditions of serum deprivation and degradation of endogenous pRB. Our results suggest that DNA shuffling may become a promising concept for DNA-based anti-cancer vaccines.

PMID: 11457555 [PubMed - indexed for MEDLINE]

1: Vaccine 2001 Mar 21;19(17-19):2583-9 Related Articles, Links

Therapeutic potential of protein and adjuvant vaccinations on tumour growth.

Gerard CM, Baudson N, Kraemer K, Bruck C, Garcon N, Paterson Y, Pan ZK, Pardoll D.

SmithKline Beecham Biologicals, R&D, Preclinical Immunology, Rue de 1'Institut 89, B-1330, Rixensart, Belgium. catherine.gerard@sbbio.be

Over 90% of cervical cancers are associated with HPV infection, the commonest being the HPV-16 subtype. Two early viral genes, E6 and 7, play major roles in the development and maintenance of the malignant phenotype. The vaccine potential of a recombinant HPV16 E7 protein was examined in two murine models of E7-expressing tumours. Formulations including the immunostimulants MPL and QS21 induced therapeutically active immune responses leading to regression of pre-established TC1 tumour lesions, associated with induction of IgG antibodies, lymphoproliferation and CTL. Our data provide a clear incentive to investigate the clinical application of this approach in cancer immunotherapy.

PMID: 11257396 [PubMed - indexed for MEDLINE]

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#4	Search **Gerard C**	07:09:00	300
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#3	Search **Dalemans W and E6**	07:06:59	0
#2	Search **Dalemans W and HPV**	07:06:46	0

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```
=> "tumor or cancer vaccine"
         295493 "TUMOR"
         121746 "TUMORS"
         335490 "TUMOR"
                  ("TUMOR" OR "TUMORS")
              0 "OR"
            948 "ORS"
            948 "OR"
                  ("OR" OR "ORS")
         204831 "CANCER"
          29040 "CANCERS"
         212852 "CANCER"
                  ("CANCER" OR "CANCERS")
          41254 "VACCINE"
          42029 "VACCINES"
          51899 "VACCINE"
                  ("VACCINE" OR "VACCINES")
L1            0 "TUMOR OR CANCER VACCINE"
                  ("TUMOR"(W)"OR"(W)"CANCER"(W)"VACCINE")

=> "tumor vaccine"
         295493 "TUMOR"
         121746 "TUMORS"
         335490 "TUMOR"
                  ("TUMOR" OR "TUMORS")
          41254 "VACCINE"
          42029 "VACCINES"
          51899 "VACCINE"
                  ("VACCINE" OR "VACCINES")
L2         1137 "TUMOR VACCINE"
                  ("TUMOR"(W)"VACCINE")

=> HPV and L2
           4768 HPV
            593 HPVS
           4806 HPV
                  (HPV OR HPVS)
L3           35 HPV AND L2

=> "early protein"
         348300 "EARLY"
             21 "EARLIES"
         348315 "EARLY"
                  ("EARLY" OR "EARLIES")
        1582536 "PROTEIN"
        1088253 "PROTEINS"
        1832740 "PROTEIN"
                  ("PROTEIN" OR "PROTEINS")
L4         1567 "EARLY PROTEIN"
                  ("EARLY"(W)"PROTEIN")

=> L4 and L3
L5            1 L4 AND L3

=> "E6 or E7"
           5012 "E6"
              0 "OR"
            948 "ORS"
            948 "OR"
                  ("OR" OR "ORS")
           4419 "E7"
L6            0 "E6 OR E7"
                  ("E6"(W)"OR"(W)"E7")
```

```
=> "E6" and L2
          5012 "E6"
L7          26 "E6" AND L2

=> "E7" and L2
          4419 "E7"
L8          44 "E7" AND L2

=> L6 and L7
L9           0 L6 AND L7

=> "lipoprotein D"
         63848 "LIPOPROTEIN"
         70169 "LIPOPROTEINS"
         87045 "LIPOPROTEIN"
                 ("LIPOPROTEIN" OR "LIPOPROTEINS")
       2057381 "D"
L10       329 "LIPOPROTEIN D"
                 ("LIPOPROTEIN"(W)"D")

=> L10 and L6
L11          0 L10 AND L6

=> L10 and L8
L12          0 L10 AND L8

=> "T helper epitope"
        706053 "T"
         22992 "HELPER"
           215 "HELPERS"
         23111 "HELPER"
                 ("HELPER" OR "HELPERS")
         32571 "EPITOPE"
         32336 "EPITOPES"
         48896 "EPITOPE"
                 ("EPITOPE" OR "EPITOPES")
L13        196 "T HELPER EPITOPE"
                 ("T"(W)"HELPER"(W)"EPITOPE")

=> L13 and L7
L14          1 L13 AND L7

=> L13 and L8
L15          1 L13 AND L8

=> influenza and L7
         18018 INFLUENZA
             6 INFLUENZAS
         18020 INFLUENZA
                 (INFLUENZA OR INFLUENZAS)
L16          1 INFLUENZA AND L7

=> infleunza and L8
             0 INFLEUNZA
L17          0 INFLEUNZA AND L8

=> influenza and L8
         18018 INFLUENZA
             6 INFLUENZAS
         18020 INFLUENZA
                 (INFLUENZA OR INFLUENZAS)
L18          2 INFLUENZA AND L8

=> CpG (w) motif
```

```
          7565 CPG
           240 CPGS
          7614 CPG
                 (CPG OR CPGS)
         37704 MOTIF
         65704 MOTIFS
         89009 MOTIF
                 (MOTIF OR MOTIFS)
L19        555 CPG (W) MOTIF

=> L19 and L7
L20          0 L19 AND L7

=> L19 and L8
L21          0 L19 AND L8

=> L2 and L19
L22          6 L2 AND L19
```

```
=> "human papilloma virus"
        1218827 "HUMAN"
         312416 "HUMANS"
        1378875 "HUMAN"
                  ("HUMAN" OR "HUMANS")
           6050 "PAPILLOMA"
           2105 "PAPILLOMAS"
             44 "PAPILLOMATA"
           7177 "PAPILLOMA"
                  ("PAPILLOMA" OR "PAPILLOMAS" OR "PAPILLOMATA")
         293164 "VIRUS"
          63144 "VIRUSES"
         303780 "VIRUS"
                  ("VIRUS" OR "VIRUSES")
L1         1486 "HUMAN PAPILLOMA VIRUS"
                  ("HUMAN"(W)"PAPILLOMA"(W)"VIRUS")

=> "E6 or E7"
           5012 "E6"
              0 "OR"
            948 "ORS"
            948 "OR"
                  ("OR" OR "ORS")
           4419 "E7"
L2            0 "E6 OR E7"
                  ("E6"(W)"OR"(W)"E7")

=> E6 and L1
'E6' NOT FOUND
The E# entered is not currently defined.

=> envelope (w) protein
          46104 ENVELOPE
           8488 ENVELOPES
          51077 ENVELOPE
                  (ENVELOPE OR ENVELOPES)
        1582536 PROTEIN
        1088253 PROTEINS
        1832740 PROTEIN
                  (PROTEIN OR PROTEINS)
L3         9721 ENVELOPE (W) PROTEIN

=> L1 and l3
L4            9 L1 AND L3

=> CpG and L4
           7565 CPG
            240 CPGS
           7614 CPG
                  (CPG OR CPGS)
L5            0 CPG AND L4

=> influenza and L1
          18018 INFLUENZA
              6 INFLUENZAS
          18020 INFLUENZA
                  (INFLUENZA OR INFLUENZAS)
L6           19 INFLUENZA AND L1

=> HPV (w) antigen
           4768 HPV
            593 HPVS
```

```
          4806 HPV
                 (HPV OR HPVS)
        246813 ANTIGEN
        196038 ANTIGENS
        306186 ANTIGEN
                 (ANTIGEN OR ANTIGENS)
L7          39 HPV (W) ANTIGEN

=> influenza and L7
         18018 INFLUENZA
             6 INFLUENZAS
         18020 INFLUENZA
                 (INFLUENZA OR INFLUENZAS)
L8           2 INFLUENZA AND L7
```

```
=> "T cell helper epitope"
        706053 "T"
       1730680 "CELL"
       1544002 "CELLS"
       2323964 "CELL"
                 ("CELL" OR "CELLS")
         22992 "HELPER"
           215 "HELPERS"
         23111 "HELPER"
                 ("HELPER" OR "HELPERS")
         32571 "EPITOPE"
         32336 "EPITOPES"
         48896 "EPITOPE"
                 ("EPITOPE" OR "EPITOPES")
L9          16 "T CELL HELPER EPITOPE"
                 ("T"(W)"CELL"(W)"HELPER"(W)"EPITOPE")

=> L1 and L9
L10          0 L1 AND L9

=> influenza and L9
         18018 INFLUENZA
             6 INFLUENZAS
         18020 INFLUENZA
                 (INFLUENZA OR INFLUENZAS)
L11          0 INFLUENZA AND L9

=>
=>
=> "T helper epitope"
        706053 "T"
         22992 "HELPER"
           215 "HELPERS"
         23111 "HELPER"
                 ("HELPER" OR "HELPERS")
         32571 "EPITOPE"
         32336 "EPITOPES"
         48896 "EPITOPE"
                 ("EPITOPE" OR "EPITOPES")
L12        196 "T HELPER EPITOPE"
                 ("T"(W)"HELPER"(W)"EPITOPE")

=> L12 and L1
L13          2 L12 AND L1

=> DIS L13 1- IBIB IABS
YOU HAVE REQUESTED DATA FROM 2 ANSWERS - CONTINUE? Y/(N):Y
THE ESTIMATED COST FOR THIS REQUEST IS 5.08 U.S. DOLLARS
DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N:Y

L13  ANSWER 1 OF 2  CAPLUS  COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER:         2003:173012  CAPLUS
DOCUMENT NUMBER:          138:203667
TITLE:                    Long peptides of 22-40 amino acid residues that induce
                          and/or enhance antigen specific immune responses.
PATENT ASSIGNEE(S):       Leids Universitair Medisch Centrum, Neth.
SOURCE:                   Eur. Pat. Appl., 50 pp.
                          CODEN: EPXXDW
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   2
PATENT INFORMATION:
```

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LOGINID:SSSPTA1648BQL

PASSWORD:
TERMINAL (ENTER 1, 2, 3, OR ?):2

* * * * * * * * * * Welcome to STN International * * * * * * * * * *

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NEWS 3	Apr 09	BEILSTEIN: Reload and Implementation of a New Subject Area
NEWS 4	Apr 09	ZDB will be removed from STN
NEWS 5	Apr 19	US Patent Applications available in IFICDB, IFIPAT, and IFIUDB
NEWS 6	Apr 22	Records from IP.com available in CAPLUS, HCAPLUS, and ZCAPLUS
NEWS 7	Apr 22	BIOSIS Gene Names now available in TOXCENTER
NEWS 8	Apr 22	Federal Research in Progress (FEDRIP) now available
NEWS 9	Jun 03	New e-mail delivery for search results now available
NEWS 10	Jun 10	MEDLINE Reload
NEWS 11	Jun 10	PCTFULL has been reloaded
NEWS 12	Jul 02	FOREGE no longer contains STANDARDS file segment
NEWS 13	Jul 22	USAN to be reloaded July 28, 2002; saved answer sets no longer valid
NEWS 14	Jul 29	Enhanced polymer searching in REGISTRY
NEWS 15	Jul 30	NETFIRST to be removed from STN
NEWS 16	Aug 08	CANCERLIT reload
NEWS 17	Aug 08	PHARMAMarketLetter(PHARMAML) - new on STN
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NEWS 20	Aug 19	IFIPAT, IFICDB, and IFIUDB have been reloaded
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NEWS 23	Sep 03	JAPIO has been reloaded and enhanced
NEWS 24	Sep 16	Experimental properties added to the REGISTRY file
NEWS 25	Sep 16	Indexing added to some pre-1967 records in CA/CAPLUS
NEWS 26	Sep 16	CA Section Thesaurus available in CAPLUS and CA
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NEWS 28	Oct 21	EVENTLINE has been reloaded
NEWS 29	Oct 24	BEILSTEIN adds new search fields
NEWS 30	Oct 24	Nutraceuticals International (NUTRACEUT) now available on STN
NEWS 31	Oct 25	MEDLINE SDI run of October 8, 2002

NEWS EXPRESS	October 14 CURRENT WINDOWS VERSION IS V6.01, CURRENT MACINTOSH VERSION IS V6.0a(ENG) AND V6.0Ja(JP), AND CURRENT DISCOVER FILE IS DATED 01 OCTOBER 2002
NEWS HOURS	STN Operating Hours Plus Help Desk Availability
NEWS INTER	General Internet Information
NEWS LOGIN	Welcome Banner and News Items
NEWS PHONE	Direct Dial and Telecommunication Network Access to STN
NEWS WWW	CAS World Wide Web Site (general information)

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updated search has not found 104 or 103 reference about E1 and or E7 plus protein D of influenzae B. Hower. eg' new member of epitope need support

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FILE 'HOME' ENTERED AT 09:57:03 ON 06 NOV 2002

=> file caplus biosis
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                       ENTRY    SESSION
FULL ESTIMATED COST                                     0.21       0.21

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FILE 'BIOSIS' ENTERED AT 09:57:17 ON 06 NOV 2002
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=> "HPV E6 and/or E7"
L1          222 "HPV E6 AND/OR E7"

=> "protein D (l) influenza B"
L2            0 "PROTEIN D (L) INFLUENZA B"

=> "influenza B"
L3         2512 "INFLUENZA B"

=> L1 and L3
L4            0 L1 AND L3

=> CpG and L1
L5            0 CPG AND L1

=> "immunostimulatory CpG oligonucleotide"
L6           26 "IMMUNOSTIMULATORY CPG OLIGONUCLEOTIDE"

=> L1 and L6
L7            0 L1 AND L6

=> "influenzae B"
L8          413 "INFLUENZAE B"

=> L1 and L8
L9            0 L1 AND L8

=> "helper epitope"
L10         392 "HELPER EPITOPE"

=> L8 and L10
L11           1 L8 AND L10
```

```
=> L1 and L11
L12           0 L1 AND L11

=> L1 and L10
L13           0 L1 AND L10

=> log off
ALL L# QUERIES AND ANSWER SETS ARE DELETED AT LOGOFF
LOGOFF? (Y)/N/HOLD:y
STN INTERNATIONAL LOGOFF AT 10:01:54 ON 06 NOV 2002
```

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 NEWS  8  Apr 22   Federal Research in Progress (FEDRIP) now available
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=> "HPV E6 and/or E7"
L1 222 "HPV E6 AND/OR E7"

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=> L1 and L3
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L5 0 CPG AND L1

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L6 26 "IMMUNOSTIMULATORY CPG OLIGONUCLEOTIDE"

=> L1 and L6
L7 0 L1 AND L6

=> "influenzae B"
L8 413 "INFLUENZAE B"

=> L1 and L8
L9 0 L1 AND L8

=> "helper epitope"
L10 392 "HELPER EPITOPE"

=> L8 and L10
L11 1 L8 AND L10

```
=> L1 and L11
L12           0 L1 AND L11

=> L1 and L10
L13           0 L1 AND L10

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=> L8 and L10
L11           1 L8 AND L10

=> L1 and L11
L12           0 L1 AND L11

=> L1 and L10
L13           0 L1 AND L10
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 NEWS  5  Apr 19  US Patent Applications available in IFICDB, IFIPAT, and
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ZCAPLUS
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                                                           ENTRY    SESSION
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=> "influenza B"
L3         2512 "INFLUENZA B"

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L4            0 L1 AND L3

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L5            0 CPG AND L1

=> "immunostimulatory CpG oligonucleotide"
L6           26 "IMMUNOSTIMULATORY CPG OLIGONUCLEOTIDE"

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=> "influenzae B"
L8          413 "INFLUENZAE B"

=> L1 and L8
L9            0 L1 AND L8

=> "helper epitope"
L10         392 "HELPER EPITOPE"

=> L8 and L10
L11           1 L8 AND L10
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=> L1 and L11
L12             0 L1 AND L11

=> L1 and L10
L13             0 L1 AND L10

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STN INTERNATIONAL LOGOFF AT 10:01:54 ON 06 NOV 2002
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L19 210 LYTA

=> fusion partner

L20 1512 FUSION PARTNER

=> L19 and L20

L21 2 L19 AND L20

=> D L21 BIB TI SO AU ABS

L21 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2001 ACS
AN 1999:511245 CAPLUS
DN 131:140508
TI Tumor-associated antigen derivatives of MAGE proteins and their use in cancer vaccine therapy
IN Cabezon, Silva Teresa; Cohen, Joseph; Slaoui, Moncef Mohamed; Vinals Bassols, Carlota
PA Smithkline Beecham Biologicals S.A., Belg.; Cabezon Silva, Teresa
SO PCT Int. Appl., 74 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9940188	A2	19990812	WO 1999-EP660	19990202
	WO 9940188	A3	19991014		
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	AU 9927220	A1	19990823	AU 1999-27220	19990202
	BR 9907691	A	20001114	BR 1999-7691	19990202
	EP 1053325	A2	20001122	EP 1999-907476	19990202
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI				
	NO 2000003958	A	20001004	NO 2000-3958	20000804

PRAI GB 1998-2543 19980205
GB 1998-2650 19980206
WO 1999-EP660 19990202
TI Tumor-associated antigen derivatives of MAGE proteins and their use in cancer vaccine therapy
SO PCT Int. Appl., 74 pp.
CODEN: PIXXD2
IN Cabezon, Silva Teresa; Cohen, Joseph; Slaoui, Moncef Mohamed; Vinals Bassols, Carlota
AB The present invention relates to derivs. of MAGE proteins and their use in
cancer vaccine therapy. In particular, the protein derivs. are: (1) fusion proteins comprising an antigen encoded by the MAGE family of genes,
linked to an immunol. **fusion partner** which provides T

helper epitopes; (2) chem. modified MAGE proteins wherein the antigen's disulfide bridges are reduced and the the resulting thiols blocked; and/or

(3) genetically modified MAGE proteins provided with an affinity tag and/or genetically modified to prevent disulfphide bridge formation. The preferred MAGE proteins are MAGE A1 and MAGE A3. The fusion proteins of the invention comprise an immunol. fusion parter such as lipoprotein D from Haemophilus influenzae, the NS1 (hemagglutinin) non-structural protein from influenzae virus, and/or the Streptococcus pneumoniae protein

LYTA. In addn., novel methods are also described for purifying MAGE proteins and for formulating vaccines for treating a range of cancers. The fusion protein LPD-MAGE3-His was used, along with an adjuvant, in a vaccine for the treatment of melanoma, and a TH1 type immune response was raised against said compn. The novel MAGE protein purifn. process of the invention comprises reducing the disulfide bonds, blocking the resulting free thiol group with a blocking group, and subjecting the resulting deriv. to one or more chromatog. purifn. steps.

=> D L21 BIB TI SO AU ABS 2

L21 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2001 ACS
AN 1999:468468 CAPLUS
DN 131:86861
TI E6 and E7 fusion proteins for vaccination against human papilloma virus
IN Dalemans, Wilfried L. J.; Gerard, Catherine Marie Ghislaine
PA Smithkline Beecham Biologicals S. A., Belg.
SO PCT Int. Appl., 62 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9933868	A2	19990708	WO 1998-EP8563	19981218
	WO 9933868	A3	19990916		
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	AU 9924191	A1	19990719	AU 1999-24191	19981218
	EP 1040123	A2	20001004	EP 1998-966706	19981218
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI				
	BR 9814487	A	20001010	BR 1998-14487	19981218
	NO 2000003303	A	20000804	NO 2000-3303	20000623
PRAI	GB 1997-27262		19971224		
	WO 1998-EP8563		19981218		

TI E6 and E7 fusion proteins for vaccination against human papilloma virus
SO PCT Int. Appl., 62 pp.
CODEN: PIXXD2
IN Dalemans, Wilfried L. J.; Gerard, Catherine Marie Ghislaine
AB The authors disclose the prepn. and characterization of fusion proteins of

E6 and/or E7 of human papilloma virus (type 16 or 18) linked to an immunol. **fusion partner** that provides Th1 cell-type help. In one example, using recombinant DNA technol., a fragment of protein D of Haemophilus influenzae B was fused to the N-terminal fragment

of E6 and expressed in E. coli. In a second example, the immunol. **fusion partner** providing T-cell help is the **LytA** amidase of Streptococcus pneumoniae. Vaccination with a fusion protein, in combination with CpG oligonucleotide, induced the regression of HPV E6-mediated tumors.

=> log off

L12 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2001 ACS
AN 1997:97727 CAPLUS
DN 126:156420
TI Prophylactic and therapeutic vector vaccination using expression constructs for individual epitopes of antigens
IN Weiner, David B.; Williams, William V.; Wang, Bin
PA Wistar Institute, USA; Trustees of the University of Pennsylvania
SO U.S., 50 pp. Cont.-in-part of U.S. Ser. No. 29,336, abandoned.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5593972	A	19970114	US 1993-125012	19930921
	ZA 9400493	A	19950103	ZA 1994-493	19940125
	WO 9416737	A1	19940804	WO 1994-US899	19940126
	W: AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, ES, FI, GB, HU, JP, KP, KR, KZ, LK, LU, LV, MG, MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SK, UA, US, US, US, US, UZ, VN				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	AU 9462320	A1	19940815	AU 1994-62320	19940126
	AU 675702	B2	19970213		
	EP 681483	A1	19951115	EP 1994-909492	19940126
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
	HU 73099	A2	19960628	HU 1995-2229	19940126
	JP 08509694	T2	19961015	JP 1994-517285	19940126
	US 5830876	A	19981103	US 1995-453349	19950530
	US 5817637	A	19981006	US 1997-783818	19970113
	US 5981505	A	19991109	US 1997-979385	19971126

PRAI US 1993-8342 19930126
US 1993-29336 19930311
US 1993-93235 19930715
US 1993-124962 19930921
US 1993-125012 19930921
WO 1994-US899 19940126
US 1995-495684 19950828

TI Prophylactic and therapeutic vector vaccination using expression constructs for individual epitopes of antigens
SO U.S., 50 pp. Cont.-in-part of U.S. Ser. No. 29,336, abandoned.
CODEN: USXXAM
IN Weiner, David B.; Williams, William V.; Wang, Bin
AB Methods of prophylactic and therapeutic immunization against infection, hyperproliferative and autoimmune diseases are disclosed. An expression construct directing the synthesis of one or more epitopes, or analogs of epitopes, of an antigen is introduced into cells of an individual. The epitope is identical or substantially similar to an epitope of a pathogen antigen, a hyperproliferative cell assocd. protein or a protein assocd. with autoimmune disease resp. Methods of immunizing against HIV are described. Succesful induction of immunity to HIV1 in mice by injection with an expression vector for the HIV-1 gene env.

L10 ANSWER 28 OF 45 CAPLUS COPYRIGHT 2001 ACS
AN 1986:532044 CAPLUS
DN 105:132044
TI Immunogenic complex and its use as an immune stimulant, **vaccines** and reagent
IN Morein, Bror
PA Swed.
SO Eur. Pat. Appl., 65 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 180564	A2	19860507	EP 1985-850326	19851016
	EP 180564	A3	19880601		
	EP 180564	B1	19910717		
	R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE				
	AT 65186	E	19910815	AT 1985-850326	19851016
	CA 1275042	A1	19901009	CA 1985-493583	19851022
	FI 8504158	A	19860502	FI 1985-4158	19851023
	FI 86801	B	19920715		
	FI 86801	C	19921026		
	ZA 8508157	A	19860625	ZA 1985-8157	19851023
	DK 8504985	A	19860502	DK 1985-4985	19851030
	DK 166653	B1	19930628		
	NO 8504355	A	19860502	NO 1985-4355	19851031
	NO 167076	B	19910624		
	NO 167076	C	19911002		
	JP 61129136	A2	19860617	JP 1985-245270	19851031
	JP 07116056	B4	19951213		
	ES 548412	A1	19861201	ES 1985-548412	19851031
	AU 8549383	A1	19860508	AU 1985-49383	19851106
	AU 589915	B2	19891026		
	ZA 8607792	A	19870527	ZA 1986-7792	19861014
	CA 1275246	A1	19901016	CA 1986-520464	19861015
	WO 8702250	A1	19870423	WO 1986-SE480	19861016
	W: AU, DK, FI, JP, NO, US				
	RW: AT, BE, CH, DE, FR, GB, IT, LU, NL, SE				
	AU 8664752	A1	19870505	AU 1986-64752	19861016
	AU 590904	B2	19891123		
	EP 242380	A1	19871028	EP 1986-906026	19861016
	EP 242380	B1	19910403		
	R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE				
	JP 63501078	T2	19880421	JP 1986-505483	19861016
	JP 07051514	B4	19950605		
	ES 2002532	A6	19880816	ES 1986-2624	19861016
	AT 62135	E	19910415	AT 1986-906026	19861016
	US 5254339	A	19931019	US 1987-70920	19870601
	FI 8702647	A	19870615	FI 1987-2647	19870615
	FI 86597	B	19920615		
	FI 86597	C	19920925		
	NO 8702484	A	19870615	NO 1987-2484	19870615
	NO 168806	B	19911230		
	NO 168806	C	19920408		
	DK 8703029	A	19870814	DK 1987-3029	19870615
	DK 165360	B	19921116		
	DK 165360	C	19930405		
PRAI	SE 1984-5493	19841101			
	EP 1985-850326	19851016			

EP 1986-906026 19861016
WO 1986-SE480 19861016
WO 1987-SE480 19870601

TI Immunogenic complex and its use as an immune stimulant, **vaccines** and reagent

SO Eur. Pat. Appl., 65 pp.
CODEN: EPXXDW

IN More

L10 ANSWER 23 OF 45 CAPLUS COPYRIGHT 2001 ACS
AN 1994:296664 CAPLUS
DN 120:296664
TI Multiple immunogens in **vaccines**
IN Becker, Robert S.; Biscardi, Karen; Ferguson, Laura; Erdile, Lorne
PA Connaught Laboratories Inc., USA
SO Eur. Pat. Appl., 16 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 588578	A1	19940323	EP 1993-307185	19930913
	EP 588578	B1	19991208		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
	CA 2105629	AA	19940315	CA 1993-2105629	19930907
	AU 9346226	A1	19940324	AU 1993-46226	19930908
	AU 677592	B2	19970501		
	ZA 9306629	A	19940330	ZA 1993-6629	19930908
	IL 106968	A1	19991028	IL 1993-106968	19930910
	NO 9303261	A	19940315	NO 1993-3261	19930913
	AT 187338	E	19991215	AT 1993-307185	19930913
	ES 2141750	T3	20000401	ES 1993-307185	19930913
	FI 9304013	A	19940315	FI 1993-4013	19930914
	JP 06192125	A2	19940712	JP 1993-229041	19930914
	JP 2512689	B2	19960703		
	US 5662909	A	19970902	US 1995-385587	19950208
	US 5837264	A	19981117	US 1995-470278	19950606
	US 5853736	A	19981229	US 1997-801152	19970218
	US 6024963	A	20000215	US 1998-193682	19981117
PRAI	US 1992-943173	19920914			
	US 1995-385587	19950208			
	US 1995-470278	19950606			

TI Multiple immunogens in **vaccines**
SO Eur. Pat. Appl., 16 pp.
CODEN: EPXXDW
IN Becker, Robert S.; Biscardi, Karen; Ferguson, Laura; Erdile, Lorne

L10 ANSWER 20 OF 45 CAPLUS COPYRIGHT 2001 ACS
AN 1995:742918 CAPLUS
DN 123:123177
TI Antigen-carbohydrate conjugates and their use in immunotherapy
IN McKenzie, Ian Farquhar Campbell; Apostolopoulos, Vasso; Pietersz, Geoff Allan
PA Austin Research Institute, Australia
SO Eur. Pat. Appl., 34 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 659768	A2	19950628	EP 1994-303817	19940526
	EP 659768	A3	19961218		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
	JP 07206707	A2	19950808	JP 1994-137976	19940527
	CA 2135833	AA	19950625	CA 1994-2135833	19941115
	AU 9481728	A1	19950629	AU 1994-81728	19941223
	AU 685539	B2	19980122		
	WO 9518145	A1	19950706	WO 1994-AU789	19941223
	W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SI, SK, TJ, TT, UA, US, UZ				
	RW: KE, MW, SD, SZ, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	AU 9513081	A1	19950717	AU 1995-13081	19941223
	US 5989552	A	19991123	US 1997-833807	19970409
PRAI	AU 1993-3223	19931224			
	US 1994-340711	19941116			
	WO 1994-AU789	19941223			

TI Antigen-carbohydrate conjugates and their use in immunotherapy
SO Eur. Pat. Appl., 34 pp.
CODEN: EPXXDW
IN McKenzie, Ian Farquhar Campbell; Apostolopoulos, Vasso; Pietersz, Geoff Alla

L10 ANSWER 17 OF 45 CAPLUS COPYRIGHT 2001 ACS
AN 1996:369881 CAPLUS
DN 125:27699
TI Nucleic acids encoding mutant matrix proteins useful for attenuation or enhancement of influenza A virus
IN Kawaoka, Yoshihiro; Castrucci, Maria R.
PA St. Jude Children's Research Hospital, USA
SO PCT Int. Appl., 96 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9610631	A1	19960411	WO 1995-US12357	19951002
	W: AU, CA, JP				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	AU 9537278	A1	19960426	AU 1995-37278	19951002
PRAI	US 1994-316419		19940930		
	US 1995-471100		19950606		
	WO 1995-US12357		19951002		

TI Nucleic acids encoding mutant matrix proteins useful for attenuation or enhancement of influenza A virus
SO PCT Int. Appl., 96 pp.
CODEN: PIXXD2
IN Kawa

L10 ANSWER 3 OF 45 CAPLUS COPYRIGHT 2001 ACS
AN 2000:155184 CAPLUS
DN 132:204050
TI Recombinant swinepox virus for expression of foreign antigens in **vaccine** preparations
IN Cochran, Mark D.; Junker, David E.
PA Syntro Corporation, USA
SO U.S., 262 pp., Cont.-in-part of U.S. Ser. No. 375,922.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 6

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 6033904	A	20000307	US 1995-480640	19950607
	US 5382425	A	19950117	US 1992-820154	19920113
	US 5869312	A	19990209	US 1993-97554	19930722
	WO 9503070	A1	19950202	WO 1994-US8277	19940722
	W: AU, CA, HU, JP, KR, NZ, PL, RO, RU, US				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	CA 2210732	AA	19960725	CA 1996-2210732	19960119
	WO 9622363	A1	19960725	WO 1996-US1485	19960119
	W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TT				
	RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	AU 9648633	A1	19960807	AU 1996-48633	19960119
	EP 801678	A1	19971022	EP 1996-904560	19960119
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV				

PRAI US 1992-820154 19920113
US 1993-97554 19930722
WO 1994-US8277 19940722
US 1995-375922 19950119
WO 1993-US324 19930113
US 1995-375992 19950119
US 1995-472679 19950607
US 1995-480640 19950607
US 1995-488237 19950607
WO 1996-US1485 19960119

TI Recombinant swinepox virus for expression of foreign antigens in **vaccine** preparations
SO U.S., 262 pp., Cont.-in-part of U.S. Ser. No. 375,922.
CODEN: USXXAM
IN Cochran, Mark D.; Junker, David E.
RE.CNT 84
RE
(1) Anon; EP 0284416 1988 CAPLUS
(2) Anon; WO 8903429 1989 CAPLUS
(5) Ben-Porat, T; Journal of Virology 1986, V154, P325 CAPLUS
(6) Bertholet, C; EMBO Journal 1986, V5, P1951 CAPLUS
(7) Bhat, R; Nucleic Acids Research 1989, V17, P1159 CAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2001 ACS
AN 1997:97727 CAPLUS
DN 126:156420
TI Prophylactic and therapeutic vector vaccination using expression constructs for individual epitopes of antigens
IN Weiner, David B.; Williams, William V.; Wang, Bin
PA Wistar Institute, USA; Trustees of the University of Pennsylvania
SO U.S., 50 pp. Cont.-in-part of U.S. Ser. No. 29,336, abandoned.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5593972	A	19970114	US 1993-125012	19930921
	ZA 9400493	A	19950103	ZA 1994-493	19940125
	WO 9416737	A1	19940804	WO 1994-US899	19940126
	W: AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, ES, FI, GB, HU, JP, KP, KR, KZ, LK, LU, LV, MG, MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SK, UA, US, US, US, US, UZ, VN				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	AU 9462320	A1	19940815	AU 1994-62320	19940126
	AU 675702	B2	19970213		
	EP 681483	A1	19951115	EP 1994-909492	19940126
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
	HU 73099	A2	19960628	HU 1995-2229	19940126
	JP 08509694	T2	19961015	JP 1994-517285	19940126
	US 5830876	A	19981103	US 1995-453349	19950530
	US 5817637	A	19981006	US 1997-783818	19970113
	US 5981505	A	19991109	US 1997-979385	19971126

PRAI	US 1993-8342	19930126
	US 1993-29336	19930311
	US 1993-93235	19930715
	US 1993-124962	19930921
	US 1993-125012	19930921
	WO 1994-US899	19940126
	US 1995-495684	19950828

TI Prophylactic and therapeutic vector vaccination using expression constructs for individual epitopes of antigens
SO U.S., 50 pp. Cont.-in-part of U.S. Ser. No. 29,336, abandoned.
CODEN: USXXAM
IN Weiner, David B.; Williams, William V.; Wang, Bin
AB Methods of prophylactic and therapeutic immunization against infection, hyperproliferative and autoimmune diseases are disclosed. An expression construct directing the synthesis of one or more epitopes, or analogs of epitopes, of an antigen is introduced into cells of an individual. The epitope is identical or substantially similar to an epitope of a pathogen antigen, a hyperproliferative cell assocd. protein or a protein assocd. with autoimmune disease resp. Methods of immunizing against HIV are described. Succesful induction of immunity to HIV1 in mice by injection with an expression vector for the HIV-1 gene env.

L3 ANSWER 8 OF 16 CAPLUS COPYRIGHT 2001 ACS
AN 1994:699108 CAPLUS
DN 121:299108
TI Antigenic polypeptides from hemagglutinins conferring multistrain immunity
to influenza viruses A and B
IN Shatzman, Allan; Kane, James; Scott, Miller; Dillon, Susan
PA SmithKline Beecham Corp., USA
SO PCT Int. Appl., 152 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9417826	A1	19940818	WO 1994-US1149	19940201
	W: JP, US				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
PRAI	US 1993-13415		19930201		
	US 1993-108914		19930818		
	US 1993-149150		19931105		

TI Antigenic polypeptides from hemagglutinins conferring multistrain immunity
to influenza viruses A and B
SO PCT Int. Appl., 152 pp.
CODEN: PIXXD2
IN Shatzman, Allan; Kane, James; Scott, Miller; Dillon, Susan
AB Fusion proteins contg. sequences from the HA2 subunits of influenza virus hemagglutinins that are capable of inducing an immune response are described for use in vaccines. The preferred **fusion partner** in these proteins is another influenza virus protein, preferably **NS1**. The construction of a no. of fusion proteins and their manuf. by expression of the gene in Escherichia coli is described. Vaccines contg. three of these fusion proteins, with Al3+ and 3D-MPL as adjuvants were prepd. and used to inoculate mice at 0 and 21 days. At day 49, the mice were challenged with 3-5 LD50 of influenza virus. Mice inoculated with the mixed antigen showed 73-100% survival depending on the strain and mice inoculated with single antigens showed 0-80% survival with controls animals showing 0-7% survival.

L3 ANSWER 6 OF 16 CAPLUS COPYRIGHT 2001 ACS
AN 1999:166640 CAPLUS
DN 130:222110
TI Fusion proteins of human papillomavirus E6 and E7 stimulate a type 1 T-cell response
IN Bruck, Claudine; Cabezon Silva, Teres; Delisse, Anne-Marie Eva Fernande; Gerard, Catherine Marie Ghislaine; Lombardo-Bencheikh, Angela
PA Smithkline Beecham Biologicals S.A., Belg.
SO PCT Int. Appl., 95 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9910375	A2	19990304	WO 1998-EP5285	19980817
	WO 9910375	A3	19990610		
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	AU 9892639	A1	19990316	AU 1998-92639	19980817
	EP 1007551	A2	20000614	EP 1998-945269	19980817
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI				
	BR 9812139	A	20000718	BR 1998-12139	19980817
	NO 2000000850	A	20000414	NO 2000-850	20000221
PRAI	GB 1997-17953	19970822			
	WO 1998-EP5285	19980817			

TI Fusion proteins of human papillomavirus E6 and E7 stimulate a type 1 T-cell response
SO PCT Int. Appl., 95 pp.
CODEN: PIXXD2
IN Bruck, Claudine; Cabezon Silva, Teres; Delisse, Anne-Marie Eva Fernande; Gerard, Catherine Marie Ghislaine; Lombardo-Bencheikh, Angela
AB The authors disclose the plasmid construction, expression, and purifn. from E. coli of human papillomavirus early proteins E6 and E7 linked to immunol. active **fusion partners**. These fusion proteins elicit a Th1 helper cell response in immunized mice. Using an E6/E7 HPV-transformed epithelial cell line, a vaccine formulation prot

L3 ANSWER 3 OF 16 CAPLUS COPYRIGHT 2001 ACS
AN 1999:511245 CAPLUS
DN 131:140508
TI Tumor-associated antigen derivatives of MAGE proteins and their use in cancer vaccine therapy
IN Cabezon, Silva Teresa; Cohen, Joseph; Slaoui, Moncef Mohamed; Vinals Bassols, Carlota
PA Smithkline Beecham Biologicals S.A., Belg.; Cabezon Silva, Teresa
SO PCT Int. Appl., 74 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9940188	A2	19990812	WO 1999-EP660	19990202
	WO 9940188	A3	19991014		
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	AU 9927220	A1	19990823	AU 1999-27220	19990202
	BR 9907691	A	20001114	BR 1999-7691	19990202
	EP 1053325	A2	20001122	EP 1999-907476	19990202
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI				
	NO 2000003958	A	20001004	NO 2000-3958	20000804

PRAI GB 1998-2543 19980205
GB 1998-2650 19980206
WO 1999-EP660 19990202

TI Tumor-associated antigen derivatives of MAGE proteins and their use in cancer vaccine therapy
SO PCT Int. Appl., 74 pp.
CODEN: PIXXD2
IN Cabezon, Silva Teresa; Cohen, Joseph; Slaoui, Moncef Mohamed; Vinals Bassols, Carlota
AB The present invention relates to derivs. of MAGE proteins and their use in cancer vaccine therapy. In particular, the protein derivs. are: (1) fusion proteins comprising an antigen encoded by the MAGE family of genes, linked to an immunol. **fusion partner** which provides T helper epitopes; (2) chem. modified MAGE proteins wherein the antigen's disulfide bridges are reduced and the the resulting thiols blocked; and/or (3) genetically modified MAGE proteins provided with an affinity tag and/or genetically modified to prevent disulfphide bridge formation. The preferred MAGE proteins are MAGE A1 and MAGE A3. The fusion proteins of the invention comprise an immunol. fusion parter such as **lipoprotein D** from Haemophilus influenzae, the **NS1** (hemagglutinin) non-structural protein from influenzae virus, and/or the Streptococcus pneumoniae protein **LYTA**. In addn., novel methods are also described for purifying MAGE proteins and for formulating vaccines for treating a range of cancers. The fusion protein LPD-MAGE3-His was used, along with an adjuvant, in a vaccine for the

treatment of melanoma, and a TH1 type immune response was raised against said compn. The novel MAGE protein purifn. process of the invention comprises reducing the disulfide bonds, blocking the resulting free thiol group with a blocking group, and subjecting the resulting deriv. to one or more